

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 63-085098

(43)Date of publication of application : 15.04.1988

(51)Int.Cl.

C30B 29/40
C30B 25/14
H01L 21/205

(21)Application number : 61-228605

(71)Applicant : NEC CORP

(22)Date of filing : 26.09.1986

(72)Inventor : MORI KAZUO

(54) VAPOR GROWTH METHOD FOR III-V COMPOUND SEMICONDUCTOR

(57)Abstract:

PURPOSE: To form an ultrathin film of an extremely highly homogeneous III-V compound semiconductor by an atomic layer epitaxial process suitable for mass-production, by alternately feeding a volatile organic compound of a group III element and volatile compound of a group V element onto a substrate crystal.

CONSTITUTION: An organic volatile compound of a group III element and a volatile compound of a V group element are alternately fed onto a substrate crystal to carry out growth of a III-V compound semiconductor by epitaxy. In the process, an organic compound having at least one bond of the groups III element to a halogen element is used as the organic volatile compound of the group III element. Elements, e.g. F, Br, I etc., in addition to Cl are effectively used as the halogen element of the organic compound of the group III element.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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